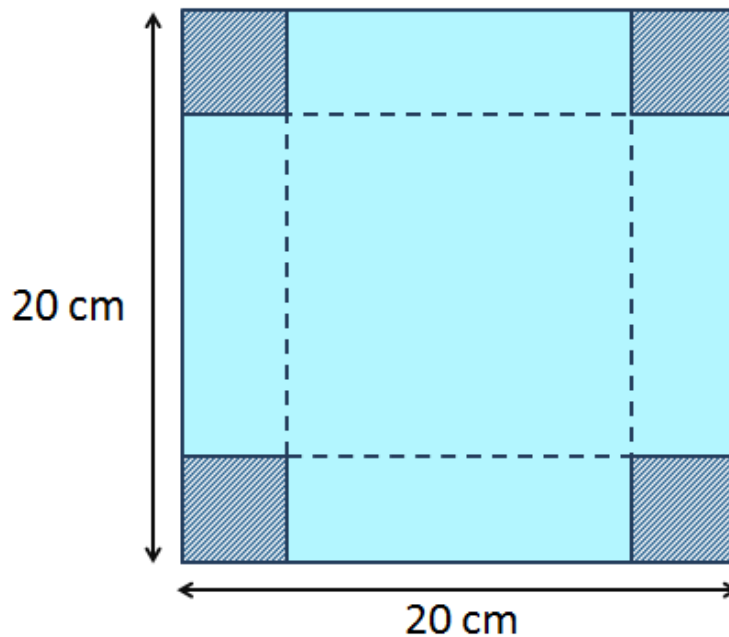


From a square sheet of paper 20 cm by 20 cm, we can make a box without a lid by cutting a square from each corner and folding up the flaps.



Find the different volumes of box it is possible to make by varying the size of the cut-out squares.

**What is the maximum possible volume?**

**What is the size of the square cut-out that produces it?**

Now try starting with different sized square sheets of paper.

**Can you find a relationship between the size of paper and the size of the square cut-out that produces the maximum volume?**